



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,472	06/27/2001	Yoshiyuki Kunito	450100-03296	5943
20999	7590	03/30/2005	EXAMINER	
FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151				ABELSON, RONALD B
ART UNIT		PAPER NUMBER		
2666				

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/894,472	KUNITO ET AL. <i>(A)</i>
	<b>Examiner</b> Ronald Abelson	<b>Art Unit</b> 2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 27 June 2001.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-39 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 June 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 38 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant does not define the term "predetermined quantity of format conversion means". Furthermore the applicant neither defines a "high frequency" nor "low frequency" of use.

***Drawings***

3. Figures 1 and 2 should be designated by a legend such as -- Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing

Art Unit: 2666

figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3, 7-9, 11, 15-17, 19, 23, 25, 29, 31, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art 'AAPA' in view of Bremer (US 6,553,002) and Ylonen (US 6,795,917).

Regarding claims 1, 9, 17, 23, and 29, AAPA teaches a data converter (fig. 2 box 205) for use in a network system (fig. 2) comprised of a plurality of communication nodes (fig. 2 203a,c,d) in which data transmitted from a transmitter

Art Unit: 2666

communication node (fig. 2 box 201) is received by a receiver communication node (fig. 2 box 202, 204).

AAPA teaches a data reception means for receiving data transmitted from the transmitter communication mode (fig. 2 box 203a, communication route, pg. 3 lines 5-8). As shown in the communication route R101 of fig. 2 data is received by node 203a.

AAPA teaches a format conversion means for converting a format of the transmitted data received by the reception means (fig. 2 box 205, pg. 3 lines 9-11).

AAPA teaches a route control means for determining a route based on a format conversion parameter concerning the format of the transmitted data received by the reception means (fig. 2 box 201, 204, 202, 203a, 205, pg. 3 lines 11). In the example shown, the server, fig. 2 box 201 stores data in the MPEG2 format, PC stores data in the MPEG2 format, and the PDA in the MPEG4 format. For data being transmitted from the PDA to the server via node 203a, the data must be sent to the format converter fig. 2 box 205 before being sent to the server. However, since the PC and server are both MPEG2 compatible, data being transmitted from the PC to the server via node 203a may be sent directly from node 203a to the server.

Art Unit: 2666

AAPA teaches a route control means based on a type of format conversion performed by the format conversion means (fig. 2 box 205, pg 3. lines 9-11). Note, since the format converter, fig. 2 box 205, performs MPEG2 to MPEG4 conversion, the data is sent from the server to node 203a via the format converter.

AAPA teaches a transmission means for transmitting the transmitted data converted by the format conversion means (fig. 2 box 205) to another communication node (fig. 2 box 203a) in accordance with the communication route determined by the route control means (pg. 3 lines 9-13).

AAPA is silent on an information reception means for receiving a communication parameter concerning a communication network connecting the communication nodes with each other and a route control means based on a communication network parameter received by the information reception means.

Bremer teaches an information reception means for receiving a communication parameter concerning a communication network connecting the communication nodes with each other (query neighboring routers, col. 4 lines 28-38) and a route control means based on a communication network parameter / congestion received by the information reception means (update entries in the route table, col. 4 lines 28-38).

Art Unit: 2666

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of AAPA by having the routers (fig. 2 box 203a,c,d) send queries to each other. This modification can be performed by following the teachings of Bremer. This would improve the system by permitting the routers to update their routing tables according to changing network conditions.

The combination of AAPA and Bremer is silent on a route control means based on a type of format conversion function of another node.

Ylonen teaches a route control means based on a type of format conversion function of another node (discover the protocol conversion characteristics of a network path, col. 4 lines 22-28).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination of AAPA and Bremer by having the routers (AAPA: fig. 2 box 203a,c,d) send probes to the other routers to determine their protocol conversion characters. This would improve the system by permitting each router to obtain the protocol conversion capabilities of the different network paths.

Art Unit: 2666

Regarding claims 3, 11, 19, 25, and 31 route control means determines a route based on a transmission delay between the communication nodes (Bremer: bottlenecks, col. 4 lines 35-38).

Regarding claims 7, 15, and 35, route control means determines a route based on information concerning a format of transmitted data which can be transmitted from the transmitter communication node, as the format conversion parameter (AAPA: MPEG2, MPEG4, pg. 3 lines 9-11). Since the server transmits MPEG2 data, a possible route for the data is from the server the format converter (fig. 2 box 205) since the format converter accepts MPEG2 data.

Regarding claims 8, 16, and 36, route control means determines a route based on information concerning a format of transmitted data which can be received by the receiver communication node (AAPA: fig. 2, pg. 3 lines 5-11). Note, since receiving PC (fig. 2 box 202) accepts MPEG2 data, data routed from the server to the PC does not go through the format converter (fig. 2 box 205), but since receiving PDA (fig. 2 box 204) accepts does not accept MPEG2 data, data routed from the

Art Unit: 2666

server to the PDA must go through the format converter (fig. 2 box 205).

6. Claims 2, 10, 18, 24, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of AAPA, Bremer, and Ylonen as applied to claims 1, 9, 17, 23, and 29 above, and further in view of Ota (US 5,347,272).

The combination is silent on the route control means determines the communication route, based on information concerning a communication distance between the communication nodes.

Ota teaches determining a communication route based on information concerning a communication distance between the communication nodes (fig. 8, col. 1 lines 12-40).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination of AAPA, Bremer, and Ylonen by having the end systems (AAPA: fig. 2 box 201, 202, 204) store the shortest routes. This can be accomplished by having the intermediate nodes (AAPA: fig. 2 box 203a,c,d) determine the shortest routes and broadcast this information to the end systems. This would improve the system by permitting the data to be transmitted efficiently over the shortest route.

Art Unit: 2666

7. Claims 4, 12, 20, 26, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of AAPA, Bremer, and Ylonen as applied to claims 1, 9, 17, 23, and 29 above, and further in view of Watanabe (US 5,802,049).

Regarding claims 4, 12, 20, 26, and 32, the combination is silent on the route control means determines the communication route, based on information concerning a band used between the communication nodes.

Watanabe teaches a route control means determines the communication route, based on information concerning a band used between the communication nodes (largest possible free band, col. 3 lines 46-49).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination of AAPA, Bremer, and Ylonen by having the routers (AAPA: fig. 2 box 203a,c,d) select a route based upon the largest free bandwidth along the connection. This can be performed by having each router broadcast to the other routers the free bandwidth along its connections. This would improve the system by helping to ensure that the data will be transmitted along a path having sufficient bandwidth to prevent congestion.

Art Unit: 2666

8. Claims 5, 13, 21, 27, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of AAPA, Bremer, and Ylonen as applied to claims 1, 9, 17, 23, and 29 above, and further in view of Thomas (US 6,205,211).

The combination is silent on the route control means determines the communication route, based on information concerning a processing delay required for conversion processing at the communication node.

Thomas teaches the route control means determines the communication route, based on information concerning a processing delay required for conversion processing at the communication node (col. 23 lines 38-47).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by having the nodes connected to format converters (AAPA: fig. 2 box 203a, 205) broadcast their processing delays. This would improve the system by allowing the system to route data based upon delay requirements.

9. Claims 6, 14, 22, 28, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of AAPA, Bremer, and Ylonen as applied to claims 1, 9, 17, 23, and 29 above, and further in view of Rexford (US 6,801,502).

The combination is silent on the route control means determines the communication route, based on information concerning an amount of the transmitted data.

Rexford teaches the route control means determines the communication route, based on information concerning an amount of the transmitted data (fig. 3 box 302, col. 7 lines 27-30).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by transmitting data to a different node once the quantity of data flowing through the current node reaches a threshold. This would improve the system by helping to balance the load through the system.

10. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of AAPA, Bremer, and Ylonen as applied to claim 29 above, and further in view of Finch (US 6,751,650).

Although AAPA teaches a communication node having a format conversion means (fig. 2 box 205), the combination is silent on a plurality of communication nodes having the format conversion means, wherein different types of format conversion processing are carried out by each of the format conversion means.

Finch teaches a plurality of communication nodes having the format conversion means, wherein different types of format conversion processing are carried out by each of the format conversion means (fig. 1 box 108, 112).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by having a plurality of communication nodes having the format conversion means, wherein different types of format conversion processing are carried out by each of the format conversion means. This can be accomplished by adding different types of format converters in the system. This would improve the system by allowing for the transfer of different types of data in the system. Note, in the system of AAPA (fig. 2) only MPEG2 and MPEG4 data may be processed.

11. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of AAPA, Bremer, and Ylonen as applied to claim 29 above, and further in view of Bremer (US 6,032,190).

The combination is silent on the transmitter communication node or the receiver communication node can transmit/receive transmitting/transmitted data in a plurality of formats, the route control means obtains a route for every type of format,

Art Unit: 2666

and controls the transmitter communication node or the receiver communication node so as to transmit/receive the transmitting/transmitted data in any of the plurality of formats.

Bremer (US 6,032,190) teaches the transmitter communication node or the receiver communication node can transmit/receive transmitting/transmitted data in a plurality of formats, the route control means obtains a route for every type of format, and controls the transmitter communication node or the receiver communication node so as to transmit/receive the transmitting/transmitted data in any of the plurality of formats (fig. 2, col. 4 lines 51-64).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination of AAPA, Bremer, and Ylonen to modify the format converters (AAPA: fig. 2 box 205) to allow for a plurality of input/output protocols as shown by Bremer (US 6,032,190). This would improve the system by allowing the network to work for a wider variety of protocols.

### **Conclusion**

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald

Art Unit: 2666

Abelson whose telephone number is (571) 272-3165. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Rao*  
Ronald Abelson  
Examiner  
Art Unit 2666

\*\*\*

*Chi Pham*  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 28  
3/28/05